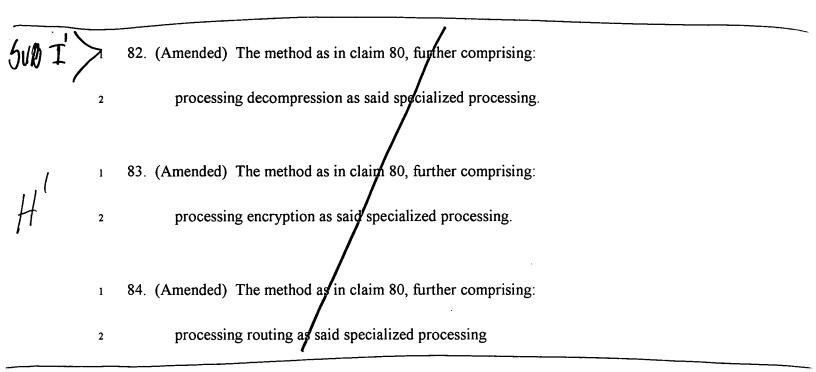
IN THE CLAIMS

Please amend the claims to read as follows.



Please add new claims 97 - 110 as follows:

SUB I'>

- 97. A router for distributing packets in a network, the packets originate at a source and are routed to a destination, comprising:
- a plurality of route processing engines located within said router;
- a mechanism that performs a hashing function on at least a portion of network layer information in said packets, said information indicating said destination, said hashing func-
- 6 tion producing an indicia of a flow; and
- a classification engine to switch packets with a same said indicia of a flow to a single route processing engine of said plurality of route processing engines.

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- 98. The apparatus of claim 97, further comprising:
- said packets are a plurality of packets, individual packets of said plurality of packets
- arrive in substantially random order to produce different values of said information in ran-
- dom order, and said classification engine carries out a hashing function to produce said indi-
- 5 cia of flow, and different values of said indicia of flow are in substantially random order in
- response to said plurality of packets arriving in random order, and a particular flow always
- 7 produces a same indicia of flow, and said particular flow is assigned to a particular route
- 8 processing engine in the order that a first packet of said particular flow first arrives at said
- 9 router.

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- 99. The apparatus of claim 98 further comprising:
- said random order of arrival of said first packet of said particular flow leads to a sub-
- stantially uniform distribution of packets being assigned to said route processing engines.
 - 100. The router of claim 97, further comprising:

said information indicating said destination includes a destination address of said 2 destination. 101. A method of operating a router, comprising receiving a packet by said router, said packet addressed to a destination, said router 2 having a plurality of route processing engines; 3 hashing a portion of a network layer information of said packet, said information in-4 dicating said destination, to determine an indication of a flow: 5 selecting, in response to said indication of a flow, one processing engine of said plu-6 rality of processing engines to process the flow indicated. 7 102. The method of claim 101, further comprising: said receiving step receives a plurality of packets, individual packets of said plurality 2 of packets arrive in substantially random order to produce different values of said informa-3 tion in random order; 4 said hashing step produces different values of said indication of a flow in substan-5 tially random order in response to said plurality of packets arriving in random order; 6 producing by a particular flow a same indicia of flow; 7 assigning said particular flow to a particular route processing engine in the order that 8 a first packet of said particular flow first arrives at said router. 9

1 103. The method of claim 102 further comprising:

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assigning, in response to said random order of arrival of said first packet of said particular flow, a substantially uniform distribution of packets to said route processing engines. Cont H 4

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104. The method of claim 101, further comprising:

including in said information a destination address of said destination.

105. A router, comprising:

a port adapter to receive a packet by said router, said packet addressed to a destina-

tion, said router having a plurality of route processing engines;

means for hashing a portion of a petwork layer information of said packet, said in-

formation indicating said destination, to determine an indication of a flow:

means for selecting, in response to said indication of a flow, one processing engine of

said plurality of processing engines to process the flow indicated.

1 106. The apparatus of claim 105, further comprising:

means for receiving a plurality of packets, individual packets of said plurality of

packets arrive in substantially random order to produce different values of said information

4 in random order;

means for producing different values of said indication of a flow in substantially ran-

dom order in response to said plurality of packets arriving in random order;

means for producing by a particular flow a same indicia of flow;

means for assigning said particular flow to a particular route processing engine in the

order that a first packet of said particular flow first arrives at said router.

107. The apparatus of claim 106 further comprising:

means for assigning, in response to said random order of arrival of said first packet of

said particular flow, a substantially uniform distribution of packets to said route processing

4 engines.

- 108. The apparatus of claim 105, further comprising:
- said information includes a destination address of said destination.
- 1 109. A computer readable media, comprising:
- said computer readable media having instructions written thereon for execution on a
- processor for the practice of the method of claim 101.
- 110. Electromagnetic signals propagating on a computer network, comprising:
- said electromagnetic signals carrying instructions for execution on a processor for the
- practice of the method of claim 101.